COMPARATIVE IMPACT OF RESIDENTIAL AND NON-RESIDENTIAL ROUTINE ON SELECTED ANTHROPOMETRICAL, PSYCHOLOGICAL AND MOTOR FITNESS VARIABLES OF SCHOOL STUDENTS

A

Synopsis

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ABSTRACT

The school environment significantly shapes the physical and psychological development of students. This study investigates the comparative impact of residential and non-residential schooling routines on selected anthropometrical (height, weight, BMI), psychological (mental health, self-confidence), and motor fitness variables (speed, agility, muscular power, and endurance) among school students aged 14–17 years. Drawing samples from Jawahar Navodaya Vidyalayas (residential schools) and KendriyaVidyalayas (non-residential schools) in Uttar Pradesh, the research adopts comparative design. Standardized tests and psychological scales will be used for data collection od data. The study seeks to examine the developmental outcomes associated with differing school environments. The findings are expected to provide empirical insights for policymakers and educators aiming to optimize school structures for holistic student development. The study holds particular relevance in the post-pandemic era, where the need to balance mental, physical, and emotional well-being in education has become increasingly critical.

Keywords: Anthropometrical, Motor Fitness, Mental Health, Self Confidence, Residential, Non-Residential

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INTRODUCTION

The school environment plays a significant role in shaping students' physical and psychological well-being. Among the factors that can influence these aspects are the residential and non-residential school routines that students follow. The routine and living arrangements of students can have a significant impact on their overall well-being and development. In the context of education, one fundamental distinction lies between residential and non-residential students. Residential students live on campus or in close proximity to the educational institution, while non-residential students commute from home or reside off-campus. This division in living arrangements can influence various aspects of students' lives, including their anthropometrical measurements, psychological well-being, and motor fitness variables. Education goes beyond simply delivering information—it's a comprehensive process that nurtures the physical, psychological, social, and emotional growth of students. A child's development hinges on their physical fitness, mental stability, and emotional well-being, all of which are heavily influenced by the school environment. The long-standing comparison between residential and non-residential schools has drawn attention from researchers and educators. Residential schools typically offer a structured and controlled environment, while non-residential schools foster more family engagement with less institutional control. Exploring how these contrasting environments impact student development is vital in today's educational setting.

Education today is widely recognized as a multidimensional process. It is no longer confined to the transmission of academic knowledge from teacher to student; instead, it encompasses the holistic development of individuals—physically, emotionally, socially, and psychologically (UNESCO, 2015). As the social institution primarily responsible for shaping young minds, the school environment is critical to fostering this multidimensional growth.The broad aim of education is to develop well-rounded individuals who are not only intellectually capable but also emotionally resilient, socially responsible, and physically healthy. In achieving these goals, the type of school environment—whether residential or non-residential—can have a profound impact. This topic has gained increasing importance with the rising focus on student mental health, physical well-being, and performance in co-curricular and sports activities alongside academics (WHO, 2018).

India, with its vast educational network, provides a unique opportunity to explore this theme. The coexistence of residential schools such as Jawahar Navodaya Vidyalayas (JNVs) and non-residential schools such as KendriyaVidyalayas (KVs) offers fertile ground for comparing two different models of education. These schools serve diverse student populations from various socio-economic backgrounds and aim to deliver quality education under different operational frameworks.

Defining Residential and Non-Residential Schooling

Residential schools refer to educational institutions where students reside on campus during the academic session. These institutions offer structured routines that

encompass not just academic learning but also physical training, co-curricular activities, and personality development programs. Students live in a controlled and supervised setting, often away from familial and community ties. The residential environment provides continuity, peer bonding, and discipline, but may also result in emotional stress due to limited parental contact (Singh & Kaur, 2017).

On the other hand, **non-residential or day schools** are institutions where students attend school for a specific duration each day and return home afterward. These schools provide the benefit of parental support, home-cooked food, and family involvement in the child's daily life. However, the lack of structured after-school supervision and activities can limit the scope of holistic development (Kumar, 2016).Studies show that early adolescence (ages 14–17) is a critical period during which most of these developmental milestones are achieved (Steinberg, 2011). The school environment, as a structured space of influence, plays a pivotal role during this phase.

Comparative Framework

When comparing residential and non-residential schools, it is essential to consider:

Discipline and Routine: Residential schools often follow a fixed schedule that includes wake-up calls, physical training, academic sessions, and supervised study time, promoting a regimented lifestyle. Non-residential schools, while structured during school hours, may not have similar oversight once the student leaves the premises.Regular participation in physical activities is more integrated into residential schooling due to the availability of time and infrastructure. Non-

residential schools may face time constraints and limited after-school engagement (Choudhary & Sharma, 2020).

Mental Health and Emotional Support: Living away from home can foster independence but may also result in homesickness and emotional challenges. Conversely, day scholars benefit from parental support but may miss out on peer bonding opportunities and independence (Khandelwal et al., 2018).

Motor Fitness: Involves specific components such as speed, agility, muscular endurance, and explosive strength. Residential schools with dedicated physical instructors and schedules are more likely to nurture these attributes effectively.

Understanding the implications of residential and non-residential school routine on anthropometrical, psychological, and motor fitness variables is crucial for educators, researchers, and policymakers. It can inform decisions related to campus infrastructure, support services, and overall student well-being. By examining these variables, we can gain valuable insights into the diverse experiences and needs of students in different living arrangements and design interventions to promote their holistic development.ndia’s educational landscape features both residential schools (like Jawahar Navodaya Vidyalayas or JNVs) and non-residential schools (like KendriyaVidyalayas or KVs). These institutions serve students from diverse socio-economic groups, aiming to provide strong academic foundations alongside extracurricular enrichment. JNVs, being fully residential, emphasize discipline through a structured daily routine that includes academics, physical activity, and personality development. In contrast, KVs allow students to return home daily,

encouraging family involvement but offering less institutional oversight. These differing environments may lead to notable variations in students' physical, mental, and motor development.

The regimented lifestyle in residential schools may influence student growth differently than the more flexible and family-oriented routine of non-residential schools. This study aims to investigate how residential versus non-residential school environments affect students' anthropometric, psychological, and motor fitness variables, and to determine whether these differences are significant.

This study aims to explore the impact of residential and non-residential school routine on selected anthropometrical, psychological, and motor fitness variables among students. By examining these variables, we hope to contribute to the existing literature on student well-being and inform educational institutions and policymakers about the potential benefits and challenges associated with different living arrangements. Ultimately, this research can guide the development of targeted interventions and support systems to enhance the overall educational experience and promote the well-being of all students, regardless of their residential status.

The necessity of this study arises from increasing concerns over the quality of student development in differing school environments. As policy shifts toward improving mental health, fitness, and well-being in education, understanding the strengths and limitations of both residential and non-residential schooling becomes vital.

Significance of the Study

With the implementation of the National Education Policy (NEP) 2020, there is renewed emphasis on holistic education, life skills, and health education. Policymakers and educators need empirical evidence to determine which school models are more effective in various domains of child development.

Furthermore, India's dual-system schooling (residential and non-residential) provides a unique landscape to explore developmental outcomes in real-world settings. This study aims to fill gaps in research by comparing students from two representative institutions: JNVs (residential) and KVs (non-residential), thereby providing meaningful insights into the benefits and drawbacks of each.

Relevance in the Current Scenario

In the post-pandemic era, discussions about school structures have intensified. Residential schools faced significant operational challenges, including isolation and disruption of routine. Non-residential schools, too, struggled with reduced physical activity and emotional disconnect due to online classes (UNICEF, 2021). Understanding which system is more resilient and supportive in such times is critical for long-term educational planning.

Moreover, the growing awareness around student wellness, mental health initiatives, and physical education programs necessitates evidence-based policymaking. This research is thus not only academically significant but also socially and practically relevant.

Conclusion

In summary, this study explores a deeply relevant educational issue—the comparative influence of residential and non-residential school environments on students' anthropometrical, psychological, and motor development. It seeks to provide insights that can help optimize educational models to produce healthier, more balanced, and competent individuals.

By focusing on both physical and psychological development within the context of structured and flexible school environments, the study contributes to the larger discourse on education reform and student well-being in India.

STATEMENT OF THE PROBLEM

The purpose of the study will be to investigate the “Comparative Impact of residential and non-residential routine on selected Anthropometrical, psychological and Motor Fitness variables of school students”.

LiteratureReviews

Sharma et al. (2018)conducted a comparative study on anthropometric and physical fitness variables among tribal residential and non-residential school players in Bastar, Chhattisgarh. The study involved 782 boys and girls aged 12 to 17 years. Using standard measures such as height, weight, 50-meter sprint, 10×4 Meter shuttle run, and vertical jump, they found no significant difference in anthropometric variables between the two groups. However, residential students demonstrated superior performance in motor fitness variables such as speed, agility, and strength. The study was limited to tribal populations and did not assess psychological variables.

Bortsie et al. (2018)explored differences in skill-related physical fitness between residential and non-residential juvenile soccer players in Ghana. The study examined 116 players aged 12 to 17 years using tests of agility, balance, coordination, power, reaction time, and speed. Results revealed that residential players outperformed their non-residential counterparts in speed and reaction time, while the non-residential group excelled in balance and agility. The research was limited to soccer players, suggesting the need for similar studies in other sports and broader age groups.

Nordzro et al. (2018)assessed the health-related physical fitness of girls in day and boarding senior high schools in Cape Coast, Ghana. Using the Prudential to evaluate cardiovascular endurance, muscular endurance, power, flexibility, and body composition, the researchers found that day-school girls scored higher across all

components. The study's major limitation was its focus solely on girls, excluding boys and other age ranges.

Mukherjee et al. (2016)performed a comparative study on skill-related fitness variables—agility, speed, and power—between 30 residential and 30 non-residential boys aged 14 to 17 years. The results showed no significant difference in agility and speed, but residential students had significantly higher power. The limited sample size and narrow scope of fitness variables were key limitations, indicating the need for broader investigations.

Shukla et al. (2008)compared growth patterns and motor qualities of boys from Jawahar Navodaya Vidyalayas (residential) and KendriyaVidyalayas (non-residential) in Chhattisgarh. The sample included 900 boys aged 10 to 18 years. Anthropometric measurements included stature, body weight, sitting height, and skinfold thickness, while motor fitness components were assessed via jumping and pull-ups. While both groups showed an increase in anthropometric values with age, JNV boys had better motor fitness scores. The study was restricted to boys in a single state and did not consider psychological dimensions.

Description of Broad Area

Delimitation

The study will be delimited to Chandauli, Ghazipur and Varanasi district students of Jawahar Navodaya Vidyalaya (Residential School) and Kendriya Vidyalaya (Non-Residential School).

1. The study will be delimited to 14-17 years age group of boys and girl's students.
2. Study will be delimited to selected anthropometrical variables i.e., Height, Weight and BMI.
3. Study will be delimited to selected psychological variables i.e., Mental Health and Self Confidence.
4. Study will be delimited to selected Motor fitness variables i.e., Muscular Power, Muscular Endurance, Speed and Agility.

Limitations

- The personal routine, habits truthfulness of the responses through questionnaire will be recognised as limitation.
- The meteorological variation such as air, temperature, atmospheric pressure, relative humidity etc. during could not be controlled and their possible influence on the study will also be recognised as a limitation.

  The emotional stages of the subjects and motivational factor, may influence the result of study, is also accepted as limitation.

- Certain factors like genetic factor, health factor can affect the result of the study will be considered as the limitation of the study.

OBJECTIVES OF THE STUDY

1. To compare the height, weight, and BMI of residential and non-residential school students.
2. To assess and compare the level of self-confidence between residential and non-residential school students.
3. To assess and compare the mental health status of residential and non-residential school students.
4. To compare the motor fitness components (speed, agility, explosive strength, and abdominal strength endurance) of residential and non-residential school students.

Hypotheses of the Study

H1: There will be no significant difference in height, weight, and BMI between residential and non-residential school students.

H2: There will be no significant difference in the level of self-confidence between residential and non-residential school students.

H3: There will be no significant difference in the mental health status between residential and non-residential school students.

H4: There will be no significant difference in motor fitness components (speed, agility, explosive strength, and abdominal strength endurance) between residential and non-residential school students.

METHODOLOGY

SELECTION OF SUBJECTS

Total500 Boys and Girls students with age ranged 14-17 years will be selected from the residential and non-residential school.

SELECTION OF VARIABLES

Keeping the feasibility criterion in mind, the following variables for the present study will be selected.

Anthropometrical Variables:

a) Weight

b) Height

c) Body Mass Index

Psychological Variables:

a) Mental Health

b) Self Confidence

Motor Fitness Variables:

a) Muscular Power
b) Muscular Endurance
c) Speed
d) Agility

CRITERION OF MEASURES

Anthropometrical variables:

Variables	Name of tests	Units
Weight	Weighing Machine	In kg
Height	Stadiometer	In meter
Body Mass Index	Weight(kg)/Height (m^2	Ratio

Motor fitness variables:

Variables	Name of tests	Units
Muscular Power	Standing Broad Jump	In centimetres
Muscular Endurance	Bent Knee Sit Ups	In Numbers/Minute
Speed	50 M Dash	In Second
Agility	4x10 M Shuttle run	In seconds

Psychological variables:

Variables	Name of tests	Units
Mental Health	Mental Health Scale by Sushma Talesara and Akhtar Bano	As per Key
Self Confidence	Adolescents Self Confidence Scale by Z. Ghazala	As per Key

STATISTICAL TECHNIQUES EMPLOYED FOR THE ANALYSIS OF DATA

To determine the Impact of Residential and Non- Residential School Routine on Selected Anthropometrical, Psychological and Motor Fitness Variables of Students the descriptive and inferential statistics will be used at .05 level of significance.

Expected Outcomes of the Study

Anthropometric Differences: The work can also show quantifiable differences in anthropometric measures (height, weight, and BMI) between residential and non-residential school students. Residential schoolchildren might have a balanced BMI and improved development due to organized routine and controlled nutrition.

Psychological Impacts: Self-confidence and psychological well-being can differ depending on school environment. The residential students can have greater self-confidence and autonomy through peer interaction and responsibility, whereas non-residential students can have family support and be emotionally stable.

Motor Fitness Performance: Residential students are more likely to excel in motor fitness measures like speed, agility, muscular power, and endurance thanks to consistent physical training and organized physical activity. Non-residential students will tend to be less consistent in motor fitness because of variable practice and limited facilities.

Gender- and age-related trends: The results can show variations in performance across genders and age groups and give in-depth information regarding how physical and psychological development varies in boys and girls in varied school environments.

Identification of strengths and gaps in school systems: The research would be able to outline some strengths of non-residential (e.g., family influence, emotional support) and residential (e.g., physical fitness, discipline) schooling and help educators and policymakers synthesize the best of both systems.

Policy and Curriculum Recommendations: On the basis of the findings, it can suggest combined measures to improve physical education, mental health services, and customized fitness planning in both school categories. This will help align practices with NEP 2020 goals.

Intervention Design: The research has the potential to assist in planning targeted intervention programs for student groups potentially lacking in particular areas (for example, physical fitness in non-residential or emotional well-being in residential).

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